

to a printed circuit board, on the pad area; preparing a fixing member having a size capable of covering an external surface of the panel assembly; and covering the panel assembly with the fixing member.

[0024] According to aspects of the present invention, the preparing of the fixing member may include cutting a polarizing sheet to include a first cover portion corresponding to a rear surface of the panel assembly, four of second cover portions respectively corresponding to side surfaces of the panel assembly, and a third cover portion corresponding to a front surface of the panel assembly.

[0025] According to aspects of the present invention, the surrounding the panel assembly with the fixing member may include attaching the first cover to the rear surface of the panel assembly, bending the second cover portions from the first cover portion and attaching the second cover portions to the side surfaces of the panel assembly, and bending the third cover portion from one of the second cover portions and attaching the third cover portion to the front surface of the panel assembly.

[0026] According to aspects of the present invention, the method may include surrounding the panel assembly with the fixing member and combining a case to the panel assembly.

[0027] Additional aspects and/or advantages of the invention will be set forth in part in the description which follows and, in part, will be obvious from the description, or may be learned by practice of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] These and/or other aspects and advantages of the invention will become apparent and more readily appreciated from the following description of the embodiments, taken in conjunction with the accompanying drawings of which:

[0029] FIG. 1 is a perspective view of a display device according to an exemplary embodiment of the present invention;

[0030] FIG. 2 is a cross-sectional view of FIG. 1, taken along the line II-II;

[0031] FIG. 3 is an exploded perspective view of an organic light emitting diode (OLED) display according to an exemplary embodiment of the present invention;

[0032] FIG. 4 is a perspective view of an organic light emitting diode (OLED) display according to an exemplary embodiment of the present invention;

[0033] FIG. 5 is a perspective view of the OLED display when is assembled according to an exemplary embodiment of the present invention;

[0034] FIG. 6 is a cross-sectional view of FIG. 5, taken along the line VI-VI;

[0035] FIG. 7 is a subpixel circuit configuration diagram of a panel assembly according to aspects of the present invention;

[0036] FIG. 8 is a partial cross-sectional view of inside of a panel assembly according to aspects of the present invention;

[0037] FIG. 9 is an exploded perspective view of an OLED display according to an exemplary embodiment of the present invention;

[0038] FIG. 10 is a perspective view of the OLED display of FIG. 9 when assembled according to an exemplary embodiment of the present invention;

[0039] FIG. 11 is a cross-sectional view of FIG. 10, taken along the line XI-XI; and

[0040] FIG. 12 is a schematic diagram of a drop jig used in a drop impact resistance test.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0041] Reference will now be made in detail to the present embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to the like elements throughout. The embodiments are described below in order to explain the present invention by referring to the figures. As those skilled in the art would realize, the described embodiments may be modified in various different ways, all without departing from the spirit or scope of the present invention. Accordingly, the drawings and description are to be regarded as illustrative in nature and not restrictive.

[0042] In the drawings, the thickness of layers, films, panels, regions, etc., are exaggerated for clarity. It will be understood that when an element such as a layer, film, region, or substrate is referred to as being "on" or "disposed on" another element, it can be directly on the other element or intervening elements may also be present. In contrast, when an element is referred to as being "directly on" another element, there are no intervening elements present. Throughout this specification and the claims that follow, when it is described that an element is "coupled" or "electrically coupled" to another element, the element may be directly coupled to the other element or coupled through a third element. In addition, unless explicitly described to the contrary, the word "comprise" and variations such as "comprises" or "comprising" will be understood to imply the inclusion of stated elements but not the exclusion of any other elements.

[0043] FIG. 1 is an exploded perspective view of a display device 1 according to an exemplary embodiment of the present invention. Referring to FIG. 1, the display device 1 includes a display panel 3 to display an image and a fixing member 5. An organic light emitting display panel can be used as the display panel 3. According to aspects of the present invention, other display panels, for example, a liquid crystal display panel, may be used.

[0044] The display panel 3 includes pixels (not shown) arranged in a matrix format on a substrate 7 (see FIG. 2). Here, the pixel is a basic unit by which an image is displayed. For example, an active OLED display includes an organic light emitting unit 9 (see FIG. 2) on the substrate 7, and the organic light emitting unit 9 includes an OLED of which pixels emit light to display an image and a thin film transistor for driving the OLED.

[0045] The display panel 3 is electrically connected to a printed circuit board (PCB) (not shown) through a flexible printed circuit board (FPCB) 11, and an electric signal is input to a data line and a gate line of the thin film transistor in the PCB so that the thin film transistor is driven by the signal. In the PCB, electronic elements are provided for processing driving signals. The FPCB 11 is extended from the display panel 3 without surrounding the display panel 3.

[0046] The fixing member 5 fixes the display panel 3 and internal parts of the display panel 3 while surrounding them. A fixing member 5 surrounds the entire body of the display panel 3 while covering a light emitting surface 3A of the display panel 3. The fixing member 5 is formed of a resin material, and particularly a window portion W that covers the light emitting surface 3A may be formed of a transparent resin material for transmitting light emitted from the display panel